

Title (en)  
CONTROL VALVE APPARATUS

Title (de)  
STEUER VENTIL

Title (fr)  
SOUPAPE DE REGULATION

Publication  
**EP 0978931 A4 20010620 (EN)**

Application  
**EP 98904413 A 19980223**

Priority  
JP 9800720 W 19980223

Abstract (en)  
[origin: WO9943072A1] An elastic body (51) is provided to absorb the energy of collision generated by the collision of a rotor positioning section (31) against a shaft positioning section (29) when the initial position of a shaft section (24) is to be determined by shifting the shaft section (24) toward a female thread section (26), so that the noise of collision generated when the rotor positioning section (31) hits the shaft positioning section (29) can be reduced. Furthermore, the force of collision the rotor positioning section (31) exerts on the shaft positioning section (29) is reduced to prevent the rotor positioning section (31) and the shaft positioning section (29) from being deformed.

IPC 1-7  
**H02K 37/24; H02K 37/14; H02K 7/06; F02M 25/07; F16K 31/04**

IPC 8 full level  
**H02K 7/06** (2006.01)

CPC (source: EP US)  
**H02K 7/06** (2013.01 - EP US)

Citation (search report)  
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• [A] US 4742989 A 19880510 - AKAGI MOTONOBU [JP]  
• [A] PATENT ABSTRACTS OF JAPAN vol. 1997, no. 3 31 March 1997 (1997-03-31)  
• [A] PATENT ABSTRACTS OF JAPAN vol. 1998, no. 6 30 April 1998 (1998-04-30)  
• See references of WO 9943072A1

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**WO 9943072 A1 19990826**; DE 69839840 D1 20080918; EP 0978931 A1 20000209; EP 0978931 A4 20010620; EP 0978931 B1 20080806;  
JP 3753253 B2 20060308; US 6224034 B1 20010501

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